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ABSTRACT

The questions proposed by this study were: (1) Do students in the teacher preparation program develop relativistic thinking in the present course of their teacher preparation studies? and (2) Would a written modified reflective judgment interview be feasible as a screening device to help educators assess the development of reflective judgment in prospective teachers? The paper focuses on the results and on the issues raised regarding the reflective judgment levels of teacher preparation students at the time they enter the program and at the time they exit the program after student teaching. Forty-two entry-level students and 35 student teachers were included in the study. Participants responded orally and in written form to ethical issues regarding sex education, corporal punishment, and a content question related to the student's reflective judgment level according to the Reflective Judgment Scale (Kitchner & King, 1985). Probe questions were used to stimulate reflective thinking in both the written and oral format. Higher levels of reflective judgment were apparent in the oral interviews when compared with responses in the written format. A discussion is offered on the importance of encouraging relativistic thinking by providing the opportunity at the undergraduate level for the individual to learn to develop and justify points of view. (JD)

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Development of a Written Assessment Device for Determining Reflective Judgment

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October 1990

Development of a Written Assessment Device For Determining Reflective Judgment

The present study investigated the development of reflective judgment of students in a teacher preparation program at a mid-western university. The current programmatic emphasis nationally for teacher preparation is on the development of reflection (Waxman, Frieberg, Vaughn & Weil, 1988). The definitions of reflection presently used by teacher educators are drawn along three major philosophical world views (1972). According to Habermas, these views represent three fundamental cognitive interests: the technical-rational, the practical, and the emancipatory, and describe the ways in which knowledge is generated and organized. For example, Cruickshank's (1985) premises regarding reflective teaching, are from the technical-rational perspective. Schon's (1983, 1987) stance represents the practical, and van Manen (1977) and Zeichner (1981-82) represent the emancipatory view. Similar constructs regarding how knowledge is generated and organized are found in cognitive psychology.

Perry (1970, 1981) demonstrated Piaget's notions of longitudinal post adolescent development. Perry developed and tested a possible scheme of intellectual and ethical development in college students. This scheme presented nine positions of development representing basically four different world views, consistent with those suggested by Habermas (1972). The initial positions of dualism maintain an absolutist perspective of knowledge based on authority. Multiplists begin to understand that there are no absolute answers, hence project the attitude that "everybody has a right to his or her own opinion". Relativists recognize that opinion must be supported with data, and although everything is relative, some things are more valued than others. The highest positions on Perry's scheme, committed relativism, constitutes the emancipatory disposition to action taken on the basis of reflection. Individuals appear to progress through these positions in a developmental way, that is, the individual not the environment is making the change. This frame of reference is consistent with van Manen's and Zeichner's emancipatory view of reflection.

Knefflekamp (1974) designed a college course that took into account students' individual positions and provided them with appropriate perturbations. She found dualists and relativists reacted differently to the same educational experiences. Her data indicate it was much easier to move a student from dualism to relativism than to move a student from relativism to committed relativism. Her data also imply that it is possible to create learning environments which encourage students to move forward on the levels of the continuum of reflective thought, but that movement occurs slowly; one course or one semester does not give enough time.

Kitchner and King (1990) report on a series of studies of reflective judgment and its relation to age, education, and experience. They developed a seven stage scale on which the participant's assumptions about knowledge and justification of knowledge are rated. The stages parallel Perry's (1970) nine positions of development.

The questions proposed by this study were:

(1) Do students in the teacher preparation program at this mid-western university develop relativistic thinking in the present general course of their teacher preparation studies?

(2) Would a written modified reflective judgment interview be feasible as a screening device to help educators assess the reflective judgment development of prospective teachers?

This paper will focus on the results and issues raised regarding the reflective judgement levels of teacher preparation students at the time they enter the program and at the time they exit the program after student teaching.

The research reported here capitalizes on Kitchner and King's (1985) work on the development of reflective judgment among college students. Kitchner and King focus on seven stages of reflective judgment development within three major categories, dualistic, multiplistic, and relativistic. Their results indicate that students tend to develop from dualistic to multiplistic and /or relativistic in their thinking processes as a result of the perturbations encountered in their university experiences.

The Reflective Judgment Scale

The seven levels in the Reflective Judgment Scale (Kitchner & King, 1985) adapted from Strange and King (1981) can be summarized briefly as follows:

Level 1: There is an objective reality which knowledge mirrors absolutely and identically. Such knowledge is gained from the person's experiences and previous convictions. Beyond this no further justification is necessary.

Level 2: Reality is objective and known by legitimate authorities. Justification for beliefs invokes the distinction between "good" and "bad" authorities and one's alignment with the former.

Level 3: Reality is objective but not always known, resulting in a temporary uncertainty in some areas. Beliefs are justified according to the mass of concrete evidence (including authorities) which leads to absolute knowledge. In the absence of such evidence one may rely on one's idiosyncratic judgment.

Level 4: There is an objective reality which can never be known by anyone (including the authorities) with certainty. There are many possible points of view but none are more correct than any others. Justification of beliefs is based on idiosyncratic judgments which are true for the individual, but not necessarily for anyone else.

Level 5: Reality exists subjectively and can be known only by subjective interpretation of evidence drawn from a particular content. Beliefs are justified by decision rules obtained from inquiry into a given domain or perspective.

Level 6: Reality exists subjectively but is known by subjective interpretation of evidence drawn across different contexts or perspectives. Beliefs are justified by decision rules generalized from these different contexts.

Level 7: There is an objective reality which is subject to our own interpretations. However, as our assumptions are tested and revised they become closer approximations of reality. One, then, can speak of some judgments as being probabilistically better than others because there is more support for their justification. But such beliefs are always open to revision if new evidence is guided by probabilistic judgment as to how close beliefs approximate reality.

Levels one through three are considered dualistic. We use the term multiplistic to identify level four responses, in the manner determined by Perry (1981). Levels five through seven are considered relativistic.

Methodology

Students in the teacher preparation program at this mid-western university were offered the opportunity to volunteer to participate in a two year longitudinal study to determine the progress of the development of relativistic thinking. Forty-two entry level students and 35 student teachers are included in the present report.

Three bi-polar issues were presented to the students in either an oral or a written form. They included issues regarding sex education, corporal punishment and a content question specifically related to the student's level. The content of the issues follows:

Issue 1: Some individuals believe that schools should teach all children about human sexuality to help prevent the spread of AIDS and teenage pregnancy. Others believe that human sexuality should not be taught in schools.

Issue 2: Some school systems believe that corporal punishment with parental consent is an appropriate way to discipline students. Others believe that physical punishment is not appropriate for school systems to use, with or without parental consent.

Issue 3: (for student teachers) In regular education classrooms there is a wide range of intellectual ability among students. Some individuals believe that ability grouping in schools should not be an instructional option. Other individuals believe that teachers should use ability grouping to meet the needs of differing ability levels.

Issue 3: (for entry level) Several states this year have moved to foster public school choice. This would allow parents to send their children to any school in their district. Some parents and educators believe that parents should be allowed to choose which school their children attend. Others believe that children should attend their own neighborhood schools.

The oral presentation followed Kitchner and King's (1985) procedure using the probe questions. The modified Reflective Judgment Interview format and probes follow.

A dilemma is read aloud to a participant, who follows along by reading the dilemma from a typed card. The following probe questions are then asked:

1. What stand do you take on this issue?
2. Why do you hold that point of view?

   How did you come to hold that point of view?

   (If no position is taken, ask:)

   Could you ever say which was the better position? How would you decide?

   Will we ever know for sure which is the better position
3. Has the other position ever seemed reasonable to you?
4. What would somebody say to defend the other point of view?

   How would you defend each of these points of view?
5. What would you say to a friend who said (state opposing point of view)?
6. When people differ (about this issue), is it the case that one is wrong and one is right
7. How is it possible that people who are equally well-informed can have such different points of view about this subject?

The following probes were added to the original Kitchner and King (1985) probes by Drs. Kelly and Pape.

8. Briefly summarize your position.

9. If new information becomes available, would you change your position? What would cause you to change your position?

On the written form the same issues were presented. The probes were presented sequentially, one to a page.

Trained raters evaluated and coded the anonymous responses to the taped oral interviews using a modified version of the Kitchner and King (1985) Reflective Judgment Scale. The range of inter-rater reliability was r. 92 to r. 98 for the team. The same team of raters evaluated and coded the written instrument. Data from the written form was evaluated for clarity, depth and elaboration of

responses by comparing the responses to the model established by the scoring rules (Kitchner & King, 1985).

Results

Table 1 presents the means of the Reflective Judgment ratings across the three issues on the nature of knowledge and nature of justification for oral and written interviews for both entry level and student teachers. The sample sizes as reported in Table 1 vary because not all students responded to the same issues during the two semesters of the project. Further some data was lost due to equipment malfunction.

Table 1

REFLECTIVE JUDGMENT

Means for Each Item at Each Level.

		Number	Sex Education	Number	Corporal Punishment	Number	Content
Entry Level							
Nature of Knowlege	Oral	16	4.56	27	4.26	27	4.37
	Written	11	4.09	13	3.39	15	3.86
Nature of Justification	Oral	16	4.75	27	4.25	27	4.48
	Written	11	4.18	13	3.93	15	4.00
Student Teachers							
Nature of Knowlege	Oral	16	4.56	17	4.29	20	4.53
	Written	13	3.69	13	3.77	15	4.00
Nature of Justification	Oral	16	4.50	17	4.11	20	4.30
	Written	13	3.85	13	4.00	15	3.93

In relationship to the nature of knowledge assessment on the oral interviews for entry level and student teachers there was a remarkable similarity

in ratings on all three issues. The range in means for entry level varied from 4.26 to 4.56. The range for student teachers was 4.29 to 4.56. The pattern of scores on the oral format for the nature of justification are similar to those observed regarding the nature of knowledge. In view of these data apparently little change in reflective judgment is observed between these two groups. Theoretically, increased education should lead to higher levels of reflectivity which was not observed here. However, the means reported in Table 1 are about one-third of a level higher than the means reported for seniors by Kitchner and King (1990). The sample in Table 1 includes juniors, primarily entry level, and seniors, student teachers.

Apparently the juniors and seniors matriculating though the teacher preparation program at this institution are scoring fairly well on the interviews with respect to the means established by Kitchner and King (1990). In view of these relatively high scores, increases in reflective judgment levels may not be expected in a one year period. The modal response for these individuals was multiplistic, indicating that they are typical of individuals in the studies reported by Kitchner and King (1990) for college juniors and seniors. The issues used with this sample were all relevant to education majors. Therefore, the means for this sample may be inflated due to the fact that the issues were in a domain (education) with which the students were familiar. Kitchner and King used issues that were not in the students' areas of expertise. Their participants responded to four ill-structured problems from the physical and social sciences.

In the written format the means presented for the nature of knowledge and the nature of justification for both groups is lower than the oral format. These scores are approximately the same as reported by Kitchner and King (1990) for their samples of college juniors and seniors. Since the levels of reflective judgment are not interval data the use of a mean is somewhat inappropriate. However, in order to make comparisons with the Kitchner and King samples where they report means, means are given for this sample with the caution that they are difficult to defend on theoretical grounds. Since the Reflective Judgment Scale is basically ordinal, a more legitimate interpretation of the scores can be represented by the percentage of each sample for each level of reflective

judgment. Figures 1 through 6 present the percentages of each sample for nature of knowledge and nature of justification for each level on both oral and written formats.

Figure 1 presents the percentages for each reflective judgment level, including both written and oral formats, on the issue of sex education among entry level and student teachers. Inspection of Figure 1 suggests that the one half level superiority for the oral format is due to the higher number of individuals at the reflective judgments levels 5 and 6 as compared with the written format for this group.

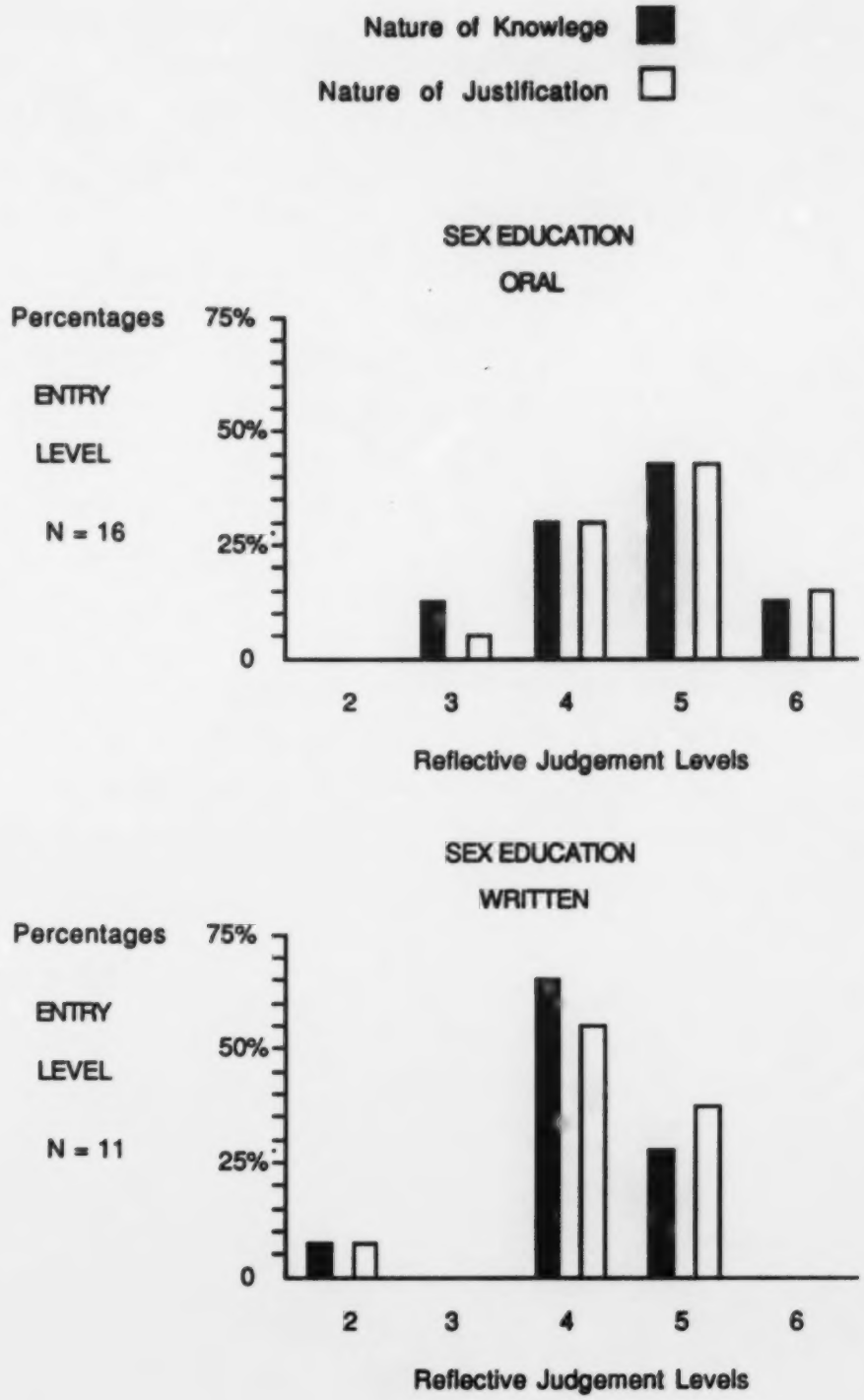
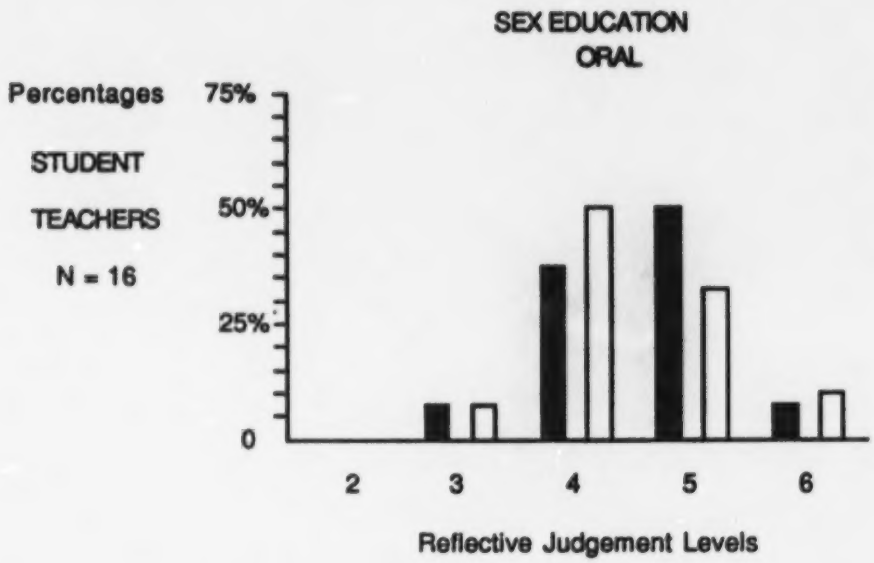

Nature of Knowlege
Nature of Justification
SEX EDUCATION
ORAL
Percentages
ENTRY
LEVEL
N = 16
75%
50%
25%
0
2
3
4
5
6
Reflective Judgement Levels
SEX EDUCATION
WRITTEN
Percentages
ENTRY
LEVEL
N = 11
75%
50%
25%
0
2
3
4
5
6
Reflective Judgement Levels

Figure 1


SEX EDUCATION
ORAL
Percentages
75%
STUDENT
TEACHERS
N = 16
50%
25%
0
2
3
4
5
6
Reflective Judgement Levels

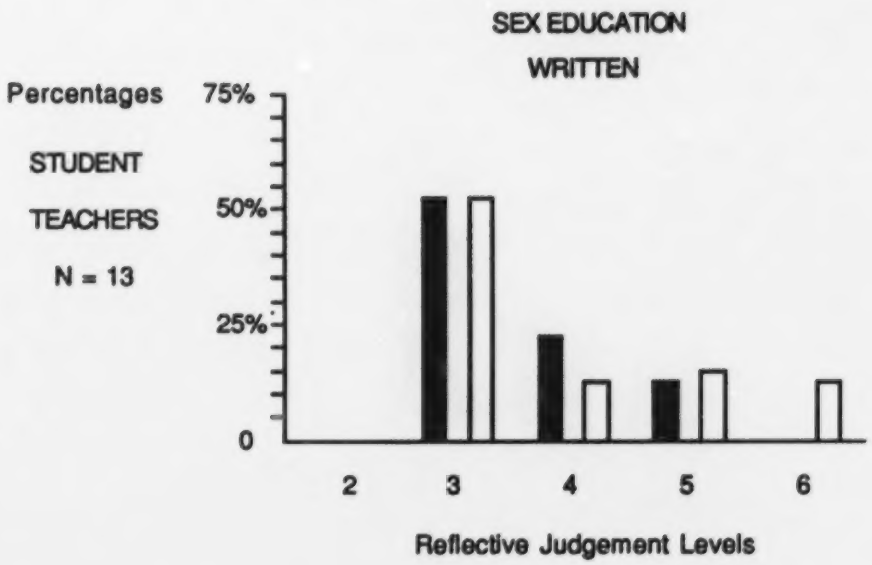
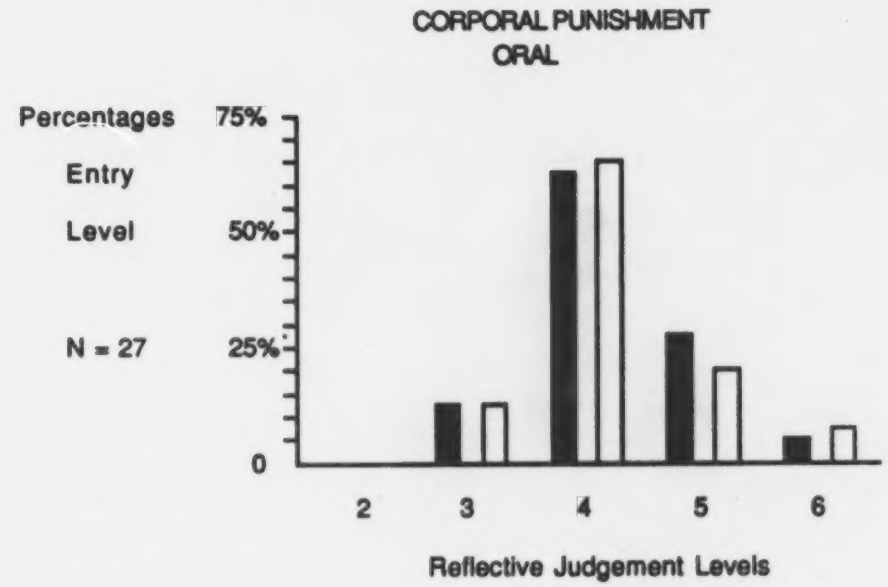

SEX EDUCATION
WRITTEN
Percentages
75%
STUDENT
TEACHERS
N = 13
50%
25%
0
2
3
4
5
6
Reflective Judgement Levels

Figure 2


CORPORAL PUNISHMENT
ORAL
Percentages
Entry
Level
N = 27
75%
50%
25%
0
2
3
4
5
6
Reflective Judgement Levels

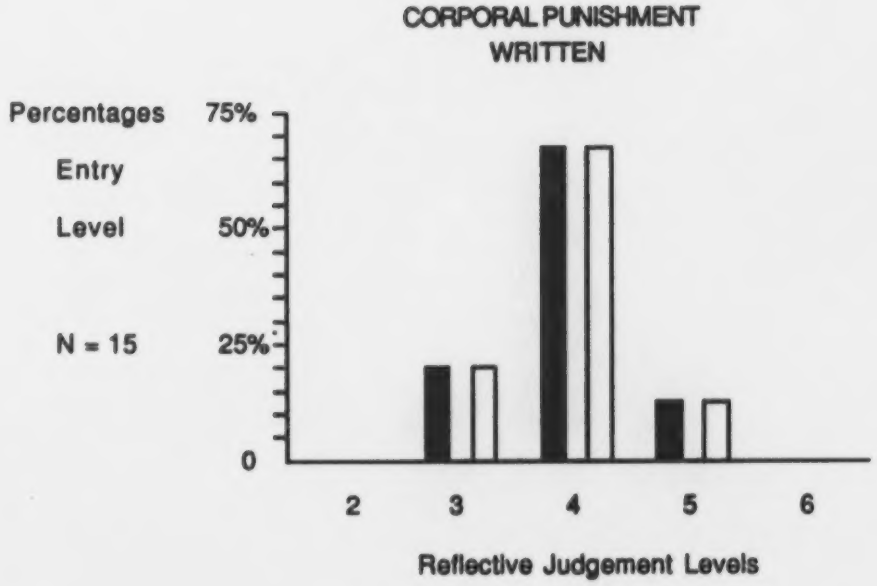
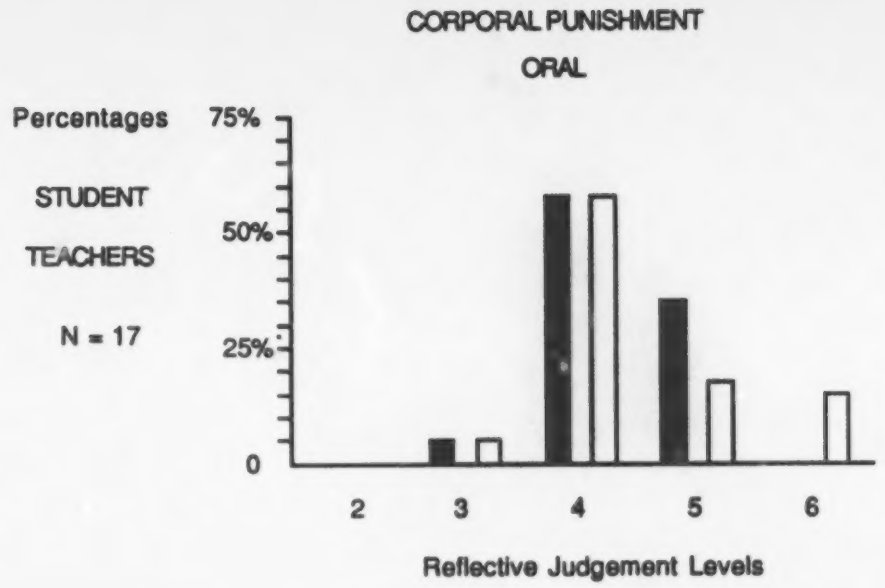

CORPORAL PUNISHMENT
WRITTEN
Percentages
Entry
Level
N = 15
75%
50%
25%
0
2
3
4
5
6
Reflective Judgement Levels

Figure 3


CORPORAL PUNISHMENT
ORAL
Percentages
75%
STUDENT
TEACHERS
N = 17
50%
25%
0
2
3
4
5
6
Reflective Judgement Levels

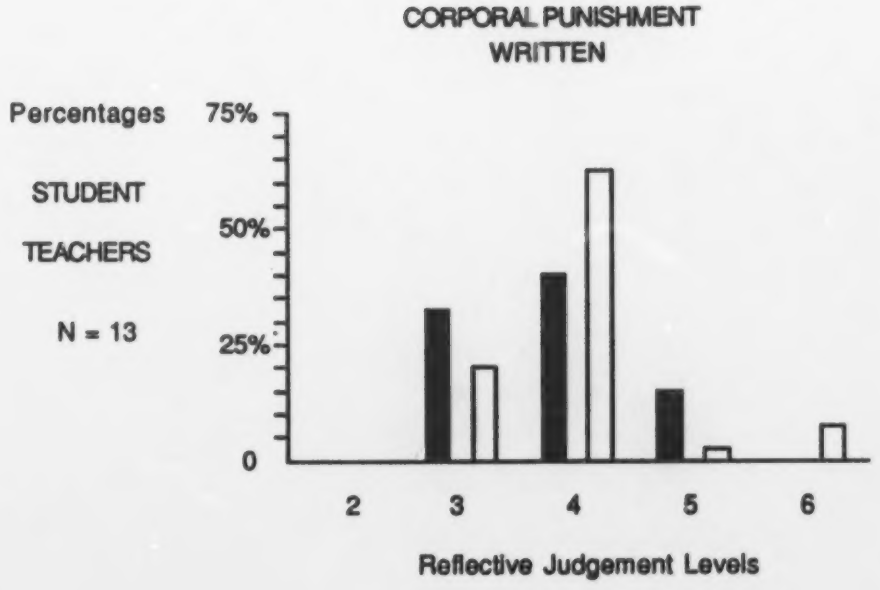
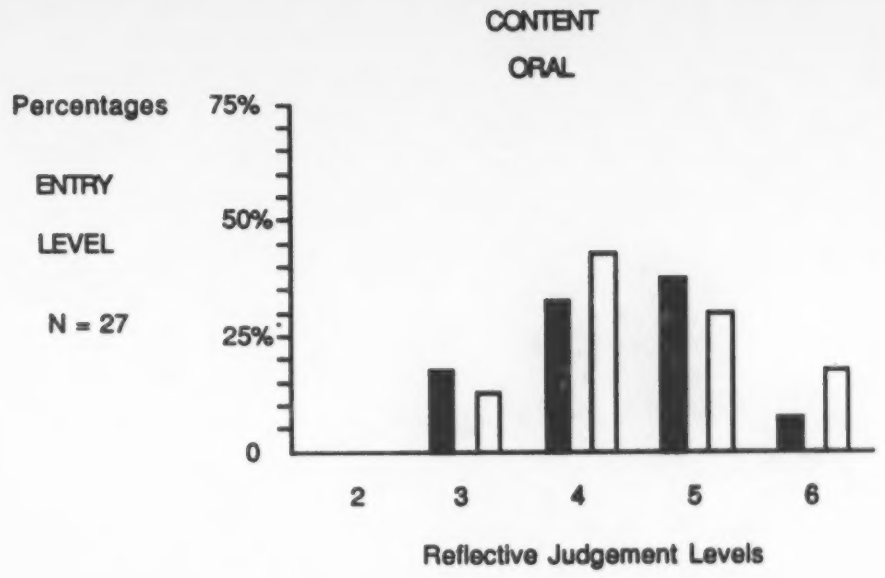

CORPORAL PUNISHMENT
WRITTEN
Percentages
75%
STUDENT
TEACHERS
N = 13
50%
25%
0
2
3
4
5
6
Reflective Judgement Levels

Figure 4


CONTENT
ORAL
Percentages
75%
ENTRY
LEVEL
50%
N = 27
25%
0
2
3
4
5
6
Reflective Judgement Levels

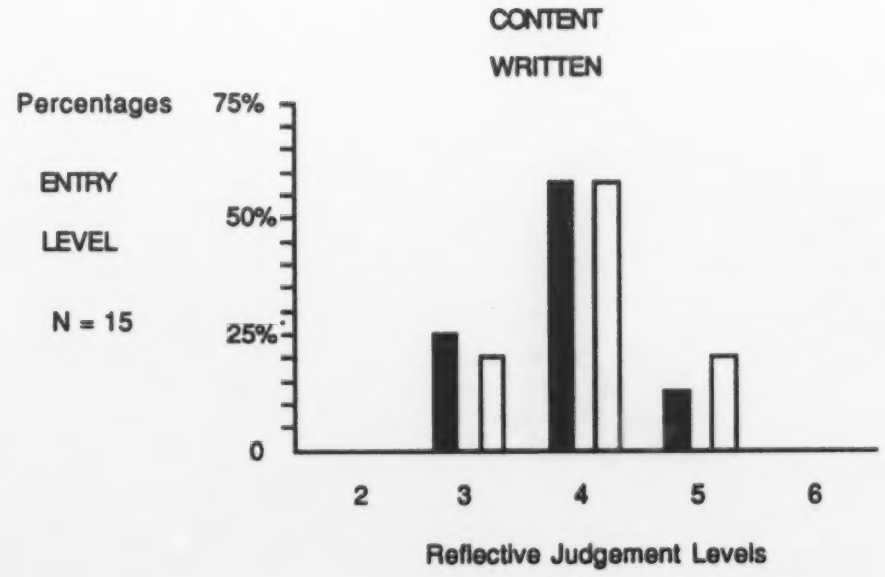
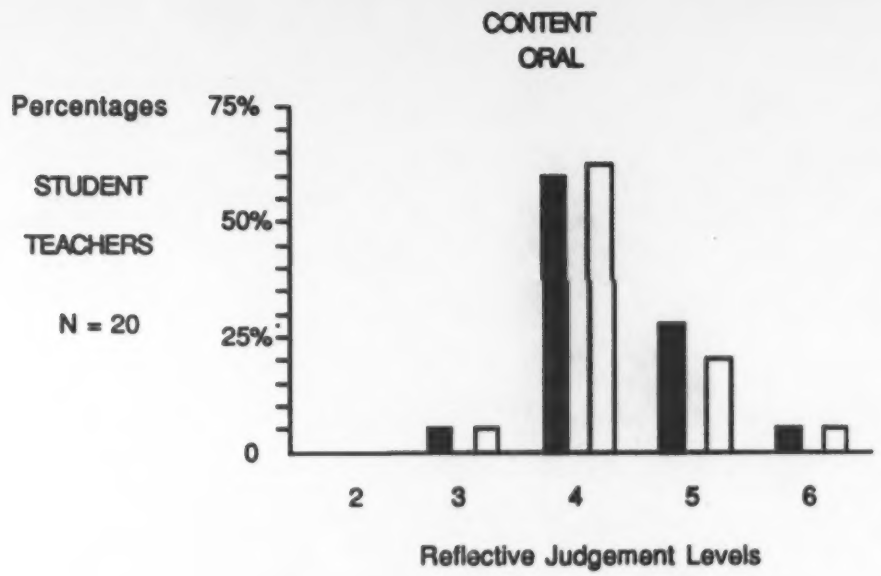

CONTENT
WRITTEN
Percentages
75%
ENTRY
LEVEL
50%
N = 15
25%
0
2
3
4
5
6
Reflective Judgement Levels

Figure 5



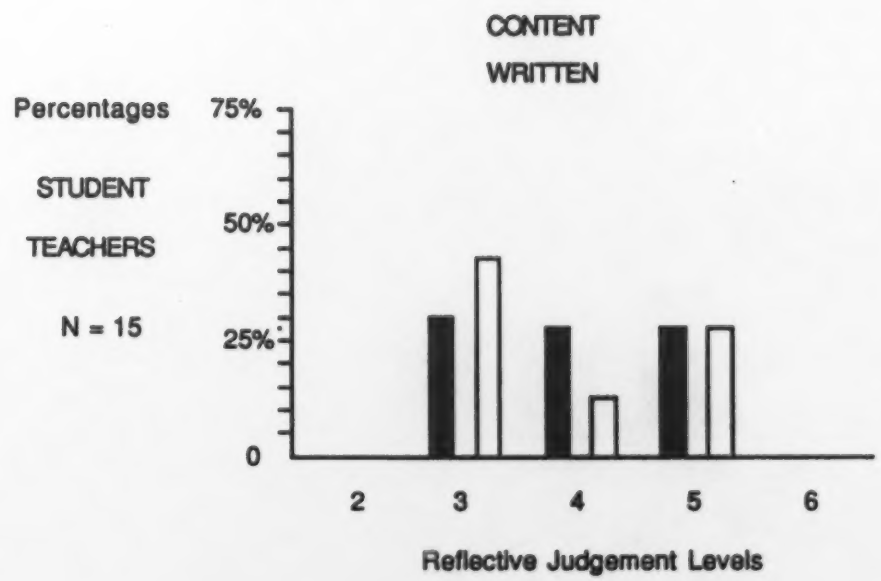


Figure 6

The pattern just discussed also reflects the distribution on all other issues for both groups with the exception that among student teachers the low mean for the written format on sex education issue appears to be due to a greater number of dualistic responses as compared to the oral format.

DISCUSSION

The more dualistic responses observed among only those student teachers taking the written format may have been influenced by the testing conditions. The written format was given to the students to take home and complete during the last two weeks of their student teaching experience. The same probes were included on the written format as those used in the oral format. However, during the oral interviews, when the interviewer sensed that the responses were incomplete, a spontaneous request was made for elaboration. This practice appears to have resulted in the higher levels of reflective judgment by some of the subjects on the oral interviews when compared with the student teachers who responded in the written format.

Providing the written form to take home and complete without supervision may have resulted in a less serious involvement on the part of the interviewees. In an attempt to ameliorate this situation some written interviews will be given within a supervised class period as part of the regular class activity in each of the next two semesters of data collection. During the class sessions, the instructor will encourage students to elaborate as much as possible, and intermittently repeat this encouragement. Even under the original conditions, the written format appears to be of value as a screening device for monitoring reflective judgment in the classroom although the mean scores are somewhat depressed. The suggested modification may improve the scores on the written format so that the written format scores may more closely approximate the oral interview scores. Thus it may become a more adequate screening device as originally intended.

The student teachers appeared to talk and reason during the oral interviews using idiosyncratic episodic justifications for the positions they took. Particularly on the issues of ability grouping and the use of corporal punishment, there was no indication of the students' awareness of research and its impact on these issues.

Regarding the oral responses on the corporal punishment issue, these students had all passed a course whose objectives included familiarizing the students with a variety of discipline and classroom management techniques, theories and methods.

There are several theories regarding the deleterious effects of corporal punishment derived primarily from Skinner's operant conditioning model which these students were taught. There is however, little empirical evidence to strongly support either position regarding the use of corporal punishment in the classroom. Despite this lack of evidence, students did not take a relativistic position on this issue. Rather than using theoretical material presented in the discipline and management class to support justification of a position, the students based their justification for their positions on their own kindergarten through twelfth grade experiences with corporal punishment. If they thought a technique such as swatting caused them to change their own behaviors as pupils, they tended to support corporal punishment. On the other hand if they believed corporal punishment had not caused changes toward more acceptable behavior they spoke against it.

In their responses during the oral interviews to the question of ability grouping, the student teachers did not discuss anything about the normal distribution curve or characteristics of slow or gifted learners. As in the case of corporal punishment, if students perceived that their own experience with ability grouping as pupils in grades kindergarten through twelve were advantageous for them, then they strongly supported ability grouping and the school district's choices to use it. If however, they believed that they way they had been grouped was disadvantageous for them, they spoke against the use of ability grouping. None raised questions about less obvious methods of in-class ability grouping such as the use of basal readers and reading groups.

On these two issues the students' reasoning did not give indications that they had taken course work which stimulated inquiry or high levels of reflective judgment. For example, two students cited an instructor who actively campaigned against ability grouping but could not give any other justification for their position than "the instructor said ...." It appears that undergraduate teaching in some classes at this institution may not present issues such as these as ill-structured. Instead it is most likely the university classroom becomes the forum by which some individual instructors perpetuate their own beliefs. Indeed, Kitchner & King (1990) observed this phenomenon as well.

School choice, the content issue for the entry level students was chosen because it was among the issues discussed in recent editions of Curriculum Update (an Association for Supervision and Curriculum Development), local and national news media. Entry level students had not had educational theory classes, therefore the content issue presented to them was required to be more general. On the issue of school choice, many students were aware of aspects such as administrative planning difficulties, the impact on intramural programs, the economic impact on schools and the community at large, and teaching difficulties including such things as class size.

The responses of both entry level and student teachers in oral interviews to the issue of sex education indicated that most had had some kind of sex education classes in the schools and at the university. The modal response for both entry level and student teachers was relativistic. As a whole, the students were well informed on both sides of the issue recognizing moral and pragmatic aspects. In contrast to responses on other issues, students cited research to ground their opinions. It would seem that the information regarding AIDS and teenage pregnancy is so widely disseminated that sex education is a major concern for many of these students.

The training required to score either oral or written Modified Reflective Judgment Interview formats would seem to obviate the use of this technique for classroom teachers. However, teachers provided with the information regarding their pupils' positions on the interview may be able to provide the necessary perturbation or support for intellectual development..

IMPLICATIONS

As Kitchner and King have indicated, universities do not provide the opportunity at the undergraduate level for the individual to struggle with tasks such as developing and justifying points of view despite the uncertainty of knowledge (Kitchner & King,1990). More often instructors offer their own points of view and solutions to puzzling issues, rather than providing a forum where students may explore conflicting points of view within a discipline.

These types of confrontations are more often provided at the graduate level. In that the modal response on all issues was at the multiplistic level, we may

infer that the students in this sample are not highly reflective at the completion of their teacher preparation program. Increased reflectivity might be more readily stimulated by presenting ill defined issues in all undergraduate course work throughout the teacher education program. University instructors need to provide the opportunity for students to compare and contrast evidence and develop points of view based on this evidence. The nature of the struggle to achieve relativism is embedded in a social context. Intellectual exchanges among peers in which students present, defend and justify their positions requires attending to other points of view and responding to the alternative justifications provided by their peers. Understanding the epistemic assumptions underlying one's knowledge decisions and diversity of justification is the hallmark of a highly reflective individual (Kitchner,1983).

A major concern of this research about what is being advocated here and by Kitchner and King (1990), is the advisability of preparing teachers to be relativistic. If the school districts maintain an ethos where administrators, teachers, pupils and the community adhere to unquestioned standards and rules including curriculum choices and methods of instruction, then it is probable that student teachers and beginning teachers will experience difficulty processing curriculum and instruction from a relativistic frame. Indeed, as Bruner (1973) argues, set or attitude is the most important of all curricular criteria. If, indeed school districts where our student teachers practice are representative of most other mid-western school systems, then we may well be training people who would not fit easily into the established educational system.

If we are truly to develop reflective teachers, that is teachers who see the world as a mixture of complexity, temporality and multiple alternatives, then it is time for teacher educators to abandon their closed system thinking. What we advocate is not a new idea. Educators and developmental psychologists (cf. Bruner,1973; Dewey; Piaget, 1970) have urged reconsideration of our views regarding the pathways of development. Bruner, Dewey, Piaget and even the Nobel prize winning chemical physicist Prigogine (1984) argue that perturbations, deliberately planned, can lead to reorganization at a higher cognitive level. Disturbed order will not necessarily lead to chaos, although too much or too

little disturbance produces disruption. The way to achieve intellectual growth is to emphasize active reflective judgment, that is to risk disequilibrium. As has been demonstrated (Perry, 1970; Kitchner & King, 1990; Knefflekamp, 1974), how an individual reacts to perturbations depends on the interaction between the individual, the perturbation and the social context. A teacher's (instructor's) task is to recognize the individual's present condition and offer perturbations or support reconstruction toward a higher cognitive level. Assuming such varied roles, often simultaneously, requires the complex skills of relativistic thinkers. Predetermined responses, one right answer, didactic teaching, and even "teacher-proof" curricula do not support transformatory change (Doll, 1983). If we desire education as a process that encourages intellectual growth, then universities, public and private schools should be molded on an open system which can only be achieved by teachers and instructors who are themselves open and relativistic.

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